SYSTEM AND METHOD FOR RE-SEQUENCING DATA PAKETS ON A PER-FLOW BASIS

ABSTRACT

Please replace the abstract with the following:

In a network device packets are marked with sequence identifiers at ingress of the device, switched through a plurality of switching planes and re-sequenced on a per flow basis at egress of the device. The re-sequencing system includes a controller that allocates to each received data packet a temporary storage location in a packet buffer. A plurality of output registers are provided, with each one associated with a flow. A pointer uses predefined parameters to point to an output register that has been previously assigned to receive data packets from the corresponding flow. Parameters in the pointed output register are correlated with parameters in a received packet to determine if the received packet is next in sequence to packets processed through a particular queue.